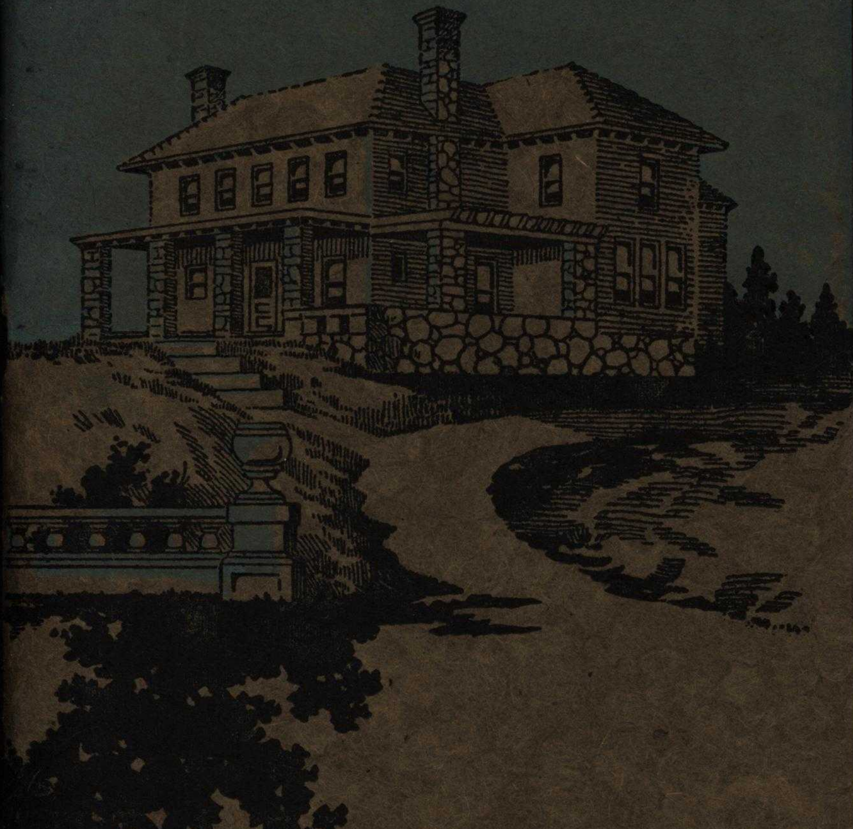

PENNSYLVANIA FIREPROOFING COMPANY

PENCO HOLLOW TILE

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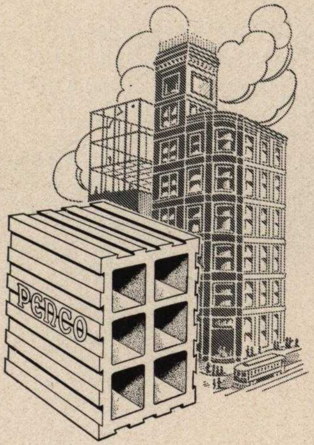
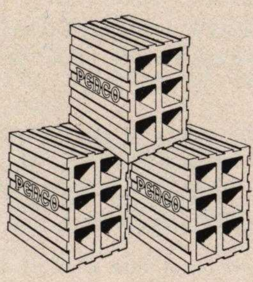


THEODORE H. SWAN,
446 Powers Bldg.
ROCHESTER, - - N. Y.

PENCO
HOLLOW TILE

1914



PENNSYLVANIA FIREPROOFING CO.

END CONSTRUCTION FLAT ARCH
SEGMENTAL ARCH BOOK TILE FOR ROOFS
SHOE TILE FOR GIRDERS
SPLIT TILE FURRING
PARTITION TILE
BUILDING BLOCKS COLUMN COVERING

To Whom it may Concern:-

¶ We are pleased to announce that we now operate one of the largest and best equipped fireproofing hollow tile factories in the United States.

¶ Our plant is located at St. Marys, Elk County, Pennsylvania, in the heart of the Fire Clay district.

¶ Our capacity is now more than five hundred tons of hollow tile each working day.

¶ Electricity is the motive power for the entire plant and the mines in connection with it.

¶ We mine our own clay by means of electric drills and steam shovels.

¶ The clay and coal is transported to our factory by our own electric locomotives, in our own cars, over our own rails.

¶ We have a large steel clay storage warehouse with a capacity of ten thousand tons of clay. This amount is always held in reserve for use in case of a break down at the mines.

¶ We have two veins of Fire Clay at our mines.—One being a plastic clay and the other a hard, refractory clay. (See clay analysis on page 30.)

¶ By actual experience we have found that a mixture of the plastic clay with the refractory clay produces an ideal quality of Hollow Tile of a terra cotta shade after burning. This mixture enables us to burn the tile very hard and have it free from fire cracks. It comes from the kilns straight and of correct size.

¶ This tile withstands the action of *water* and *fire* under actual fire tests much better than if it were made from the refractory clay alone.

¶ By this mixture we have overcome the brittleness that is so common in hollow tile made from a pure refractory Fire Clay burning a light yellow or buff shade.

¶ We have had twelve years of experience in the manufacture of Clay Products.

CONCRETE
VS.
HOLLOW TILE.

The assumption regarding concrete as a building material is, that being non-combustible and a fair non-conductor of heat, it would, unlike steel, not collapse or be seriously damaged under serious fire conditions. This idea has been proven a fallacy.

In his reports, Capt. John Stephen Sewell, the eminent Government expert, has stated that "Under temperatures of from 800° to 1000° F., possibly under temperature as low as 600° F., Portland cement that has set, begins to lose its water of crystalization. As long as this temperature continues the loss progresses, until finally all or most of the water will be driven off and the cement or concrete will have lost most of its strength, in fact will be ruined."

A close examination will show that it is absolutely dead and so soft and sandy that it will readily crumble between thumb and finger, in fact that it has been completely disintegrated by the heat.

Mr. J. S. Dolin in his "Digest of Physical Tests and Laboratory Practice" says of concrete "That it loses its strength under heat, is ruined by water applied during a fire, and will disintegrate after a fire if not during the fire itself. Disastrous results may follow from confidence in a building protected with such material." It is said that Mr. Ernest Flagg, architect of the Singer Building, New York City, made the statement that "In designing the Singer Building I was unrestricted as to the materials I should specify, and I selected those that would make the building absolutely safe; steel and terra cotta hollow tile, that's the combination."

Mr. Paul Starrett, of the Fuller Construction Company, one of the largest building concerns in the country, is reported to have said "The most perfect type of fireproof building is that made of steel and terra cotta hollow tile, the steel for the frame and the tile for the column covering, floors and partitions."

In the great conflagration at San Francisco terra cotta hollow tile fireproofing fully demonstrated its complete ability to protect the structural members of a building.

Hollow tile is an adaption of two scientifically established facts, viz: 1st.—Well burned fire clay cannot be destroyed by fire. 2d.—A dead air space is the best insulation against heat or cold, and consequently the best protection against the destruction of high temperatures as generated in burning buildings.

COSTS.

There is an exaggerated idea as to the cost of a fireproof building, probably due to the fact that most people are prone to associate the idea of fireproofing under our methods with the largest and most elaborate buildings they know of, with the consequent assumption that fireproofing can only be profitable and economical when used in buildings of that class.

As a matter of fact, owing to the constantly increasing cost of lumber, the margin between combustible and fireproof construction has been constantly narrowing; and it may be safely stated that the average difference on all classes of buildings to-day does not exceed 10%, and there are frequent cases where fireproof construction, figuring on first cost only, is as low as the ordinary combustible construction.

It is now clearly established, after more than thirty years of experience, that Terra Cotta Hollow Tile is the standard fireproofing material, and that it is one of the strongest, most efficient and adaptable structural materials in present use. For years it was used simply as a fire protective covering for steel structural members, for partititions and floor arches. While still finding its greatest market for these purposes, it is now being successfully used in the erection at moderate cost of various apartment houses, residences of modest design, and even garages, stables and other outbuildings.

It has been fully demonstrated that by reason of the indestructibility of the material, this construction costs far less for maintenance and repairs than is the case with buildings of frame, or brick and wood. Floors and walls of wood construction warp and crack, and destroy plaster and expensive decorations: Tile endures for all time.

The air space in walls of Hollow Tile furnish complete insulation against atmospheric conditions, thereby reducing the cost of heating to a minimum. In addition to this they are moisture proof, sound proof and vermin proof.

COMPARATIVE COSTS.

For the purpose of comparison, a small modern eight-room house of good design and excellent arrangement was chosen, the original having been actually built. This house is typical in size and arrangement of thousands which are being erected throughout the East. Plans and specifications were prepared for obtaining bids for this house, when built, with the following types of exterior wall construction:

No. 1—Wire lath on wood frame, covered with stucco outside; inside surface furred, lathed and plastered.

No. 2—Six-inch hollow tile; finished with a 4-inch brick veneer on the outside and plastered directly on tile to the inside.

No. 3—Eight-inch hollow tile, stuccoed on the outside and plastered directly on tile on the inside.

No. 4—A 12-inch solid brick wall; inside surface furred, lathed and plastered.

No. 5—A 10-inch brick wall, i. e., two 4-inch walls tied together with metal ties and separated by a 2-inch air space; inside surface plastered directly on brickwork.

No. 6—Frame covered with boards and finished with clapboards over building paper; inside surface furred, lathed and plastered.

Everything about the house, except the outer wall construction, was identical in all six types. Five well-known reputable contractors bid on this house as follows:

Average of All Bids.	**Percentage Excess Cost of Each Type Over Frame Type No. 6.**
No. 1—$6950.	2.9%
No. 2— 7485.	10.7%
No. 3— 7180.	6.3%
No. 4— 7640.	13.0%
No. 5— 7370.	9.1%
No. 6— 6750.	0.0%

These figures will be a surprise to many. These bids were produced under conditions of absolute fairness, by totally disinterested and unprejudiced experts. In view of these facts, what reasonable explanation can we find for the erection of the vast number of frame houses each season? A very simple and satisfactory one, viz.: *the public does not know the truth.* The figures given above are plain and should be convincing. If not, we are prepared to furnish greater details regarding these bids to any one interested. We solicit your careful investigation.

PARTITION TILE.

Terra Cotta Partitions are the only ones that will withstand a great conflagration, When they are properly built upon the fireproof arches or beams, laid with cement mortar and wedged against the floor arches at the ceiling above, they have stood intact, while all forms of plaster blocks crumbled into piles of rubbish, and metal lath partitions twisted into scrap iron.

In addition to fire resisting qualities, tile partitions are light, strong, easily erected by bricklayers, and do not transmit heat, cold or **sound.**

Three-inch partitions can be safely used up to 12 feet in height, 4-inch to 14 feet and 6-inch to 20 feet.

The Blocks are commonly made 12 inches high by 12 inches long,

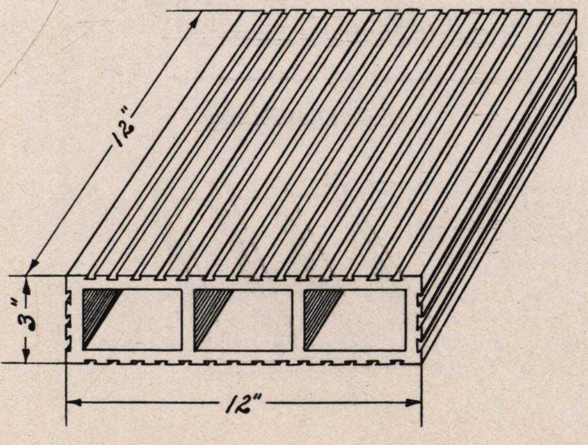
Blocks should be set on end, except top course, which may be set on side. Plaster applied directly to blocks.

Burned hollow clay tile partitions are much superior to plaster or gypsum block in which a mixture of lime, plaster and wood fibre is used. A partition built of plaster block will crack from the jar of a closing door and very frequently the door frame will work loose from partition. The wood fibre used in the plaster block is a combustible material and the lime plaster is very seriously affected by water.

It is a fact worthy of note, that in all first class buildings all load bearing partitions, or partitions subject to jar are always specified *hollow clay tile.*

Standard Blocks.

Size	2 x 12 x 12,	Weight	15	lbs.	per	square	foot.
"	3 x 12 x 12	"	16	"	"	"	"
"	4 x 12 x 12	"	17	"	"	"	"
"	5 x 12 x 12	"	19	"	"	"	"
"	6 x 12 x 12	"	21	"	"	"	"
"	7 x 12 x 12	"	25	"	"	"	"
"	8 x 12 x 12	"	30	"	"	"	"
"	9 x 12 x 12	"	32	"	"	"	"
"	10 x 12 x 12	"	35	"	"	"	"
"	12 x 12 x 12	"	39	"	"	"	"



WALL FURRINGS.

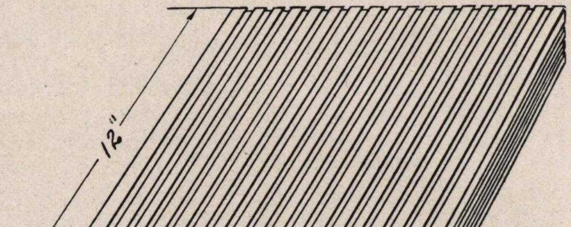
Brick walls exposed to the weather must be furred to prevent dampness reaching the interior and destroying the plastering. For this purpose furring blocks of terra cotta are used.

Split furring is made either 1½″ or 2″ thick and 12″ square. The ribs being set against the wall, an air space is formed which effectively checks the passage of moisture. They should be set with ribs vertical and fastened to the wall by driving tenpenny nails in the joints of the brick work, the head of the nail being bent down upon the tile, using a nail over every third block in every second course. The faces of the blocks are grooved to receive plaster.

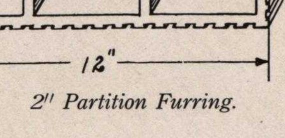
This form of furring is the most effective and at the same time the cheapest. In many instances regular 2″ partition is used for furring.

Standard Forms.

Size	2	x 12 x 12	Partition,	Weight	per	sq.	foot,	15	lbs.
“	1½	x 12 x 12	Split;	“	“	“	“	8	“
“	2	x 12 x 12	“	“	“	“	“	9	“
“	3	x 12 x 12	“	“	“	“	“	11	“

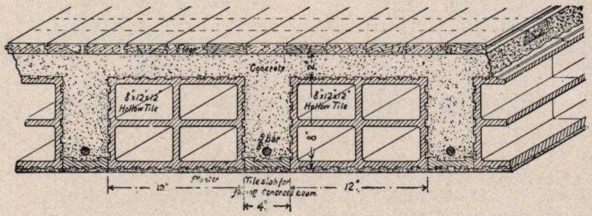


2″ Partition Furring.



Split Furring.

COMBINATION HOLLOW TILE AND REINFORCED CONCRETE FLOOR ARCHES.



A very desirable construction for Residences, Garages, Warehouses, Apartment and Similar Buildings.

Note particularly the all tile ceiling effect by the [use of keyed slabs facing concrete beams.

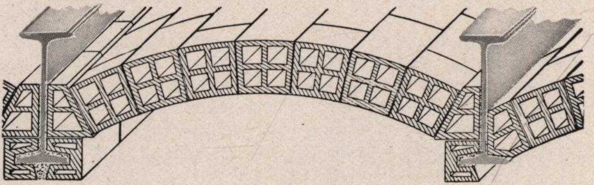
Load Table, Spans,—Factor of Safety 4.

Size of Tile	Steel	6' 0"	7' 0"	8' 0"	9' 0"	10' 0"	12' 0"	14' 0"	16' 0"	18' 0"	20' 0"	22' 0"	24' 0"
4"	5/8" sq.	446	314										
5"	11/16" "	660	470	347	263	202	123	76	45				
6"	3/4" "		655	487	372	290	183	118	77	48			
7"	13/16" "			650	499	392	252	168	113	76	49		
8"	7/8" "				645	509	332	225	156	108	74	49	
9"	15/16" "					640	421	289	204	145	103	72	49
10"	15/16" "						521	361	258	187	136	98	70
12"	1 1/16" "							526	381	283	212	159	119
15"	1 1/8" "								610	459	352	272	212

2" Cement top finish as shown in cut.

Weight of floor per sq. ft. 4"-50 lbs., 5"-55 lbs., 6"-60 lbs., 7"-65 lbs., 8"-70 lbs., 9"-75 lbs., 10"-80 lbs., 12"-90 lbs., 15"-105 lbs.

HOLLOW TILE SEGMENTAL FLOOR ARCHES.



Weight per square foot; 4″, 25 lbs. 6″, 29 lbs.

This form of Arch is the strongest and cheapest possible. It is particularly adapted to warehouses, factories, sidewalks, or wherever great strength is required and a flat ceiling is not necessary.

An elliptical arch, with raised skewback at the beams, reduces the amount of the concrete fill at the haunches and lessens the dead load, but the large skewbacks are slightly more expensive than the smaller ones.

Where a very light, strong arch is required in deep beams, and a flat ceiling is also demanded, this result can be obtained by using a metal lath ceiling suspended below the beams. This form has been used for years in Public School buildings.

Safe Loads per Square Foot.

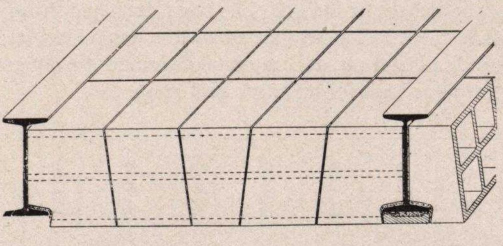
Factor Safety 7.

Weight of tile deducted.

Deduct weight of concrete fill, plastering, beams, etc.

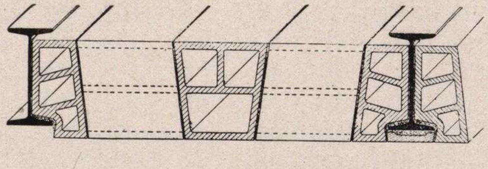
Spans Feet	Rise Inches	4-inch Arch Lbs.	6-inch Arch Lbs.
4	1½	1545	1986
	2	1736	2233
5	1½	1072	1379
	2	1379	1773
6	1½	898	1154
	2	1148	1476
7	1½	762	981
	2	983	1264
8	1½	668	859
	2	854	1099
9	1½	590	758
	2	759	977
10	1½	531	683
	2	783	879

HOLLOW TILE FLAT FLOOR ARCHES.



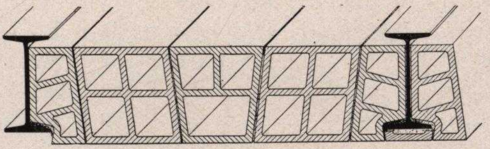
The above cut illustrates Standard End Construction Arch, three webs horizontal and three webs vertical, and is the type more generally used in modern buildings.

Weight per sq. ft.—6″, 22 lbs.—7″, 25 lbs.—8″, 30 lbs. 9″, 33 lbs.—10″, 35 lbs.—12″, 40 lbs.—15″, 52 lbs.—16″, 56 lbs.



Above cut illustrates Standard Flat Arch, side construction, skews and keys and end construction intermediates.

For weights see table below for all side construction form.



Above cut illustrates Standard Side Construction Arch which we make for all sizes of standard beams-dimensions.

Weights—6″, 23 lbs.—7″, 26 lbs.—8″, 32 lbs.—9″, 35 lbs.—10″, 37 lbs.—12″, 42 lbs.—15″, 57 lbs.—16″, 60 lbs.

For safe loads see next page.

SAFE LOADS— FLAT ARCHES.

Factor Safety 7.

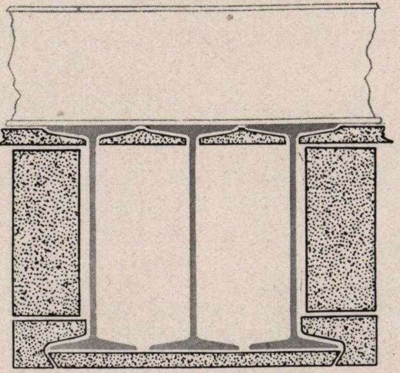
The weight of the arch has been deducted from safe loads in table below, so that only the dead load of concrete fill, plastering, etc., must be deducted to obtain the net safe live load for any arch and span.

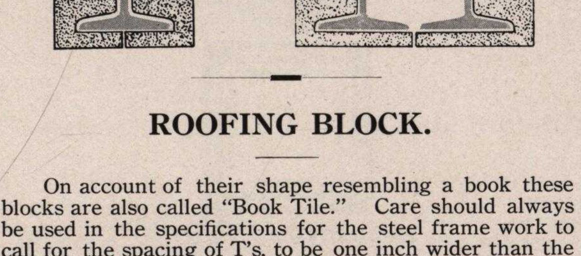
Arches	6 Inches	7 Inches	8 Inches	9 Inches	10 Inches	12 Inches	15 Inches
Spans Feet and Inches	Pounds	Pounds	Pounds	Pounds	Pounds	Pounds	Pounds
3—0	458	588	735	901	1084	1487	2210
3—3	386	496	622	763	916	1262	1877
3—6	330	424	531	653	785	1083	1612
3—9	284	365	459	565	679	938	1398
4—0	247	318	399	493	593	820	1223
4—3	216	278	350	433	521	722	1079
4—6	190	245	309	382	461	640	951
4—9	168	217	274	340	410	571	855
5—0	149	193	244	304	367	511	767
5—3	..	172	218	272	330	460	691
5—6	..	154	196	245	297	416	626
5—9	..	139	176	222	269	378	569
6—0	..	..	159	201	244	344	518
6—3	..	..	144	183	222	314	474
6—6	..	..	131	166	203	287	435
6—9	..	..	..	152	186	264	400
7—0	..	..	..	139	170	243	369
7—6	..	..	..	..	144	206	315
8—0	..	..	..	..	..	177	272
8—6	..	..	..	..	..	153	236
9—0	..	..	..	..	..	132	205
9—6	..	..	..	..	..	..	180
10—0	..	..	..	..	..	..	158

GIRDER COVERING.

It is necessary that girders projecting below the ceiling be protected by fire clay tile. In case of a serious fire the integrity of the whole structure depends upon the thorough protection of the columns and girders, and no reasonable expense should be spared to accomplish this.

The lower flanges of beams are usually covered by "shoe tile" and the webs by partition blocks. All girder covering blocks are hollow.





ROOFING BLOCK.

On account of their shape resembling a book these blocks are also called "Book Tile." Care should always be used in the specifications for the steel frame work to call for the spacing of T's, to be one inch wider than the length of the tile; for example, for blocks 24 inches long the T irons should be spaced 25 inches on centers. This is the spacing most commonly used.

Standard Sizes and Weights.

3 x 12 x 18,	20 lbs. per square foot.
3 x 12 x 20,	20 " " " "
3 x 12 x 24,	20 " " " "
4 x 12 x 18,	22 " " " "
4 x 12 x 20,	22 " " " "
4 x 12 x 24,	22 " " " "

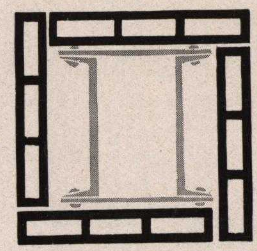
COLUMN COVERING.

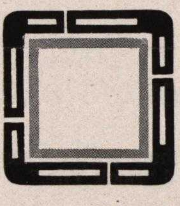
Experience has demonstrated beyond question the necessity for thoroughly protecting the cast iron or steel columns supporting walls or floors, and that tile is the most efficient material for this purpose.

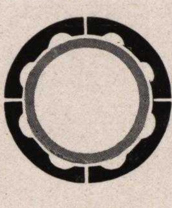
Square columns are commonly encased in square coverings made of partition blocks set breaking joints. If round corners are desired they can be made in a variety of ways.

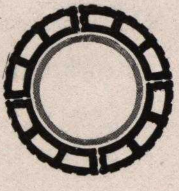
Cuts below show methods commonly used.

A low rate of fire insurance cannot be secured if the columns are not properly protected, and the lowest rate is given when fire clay tile is used.



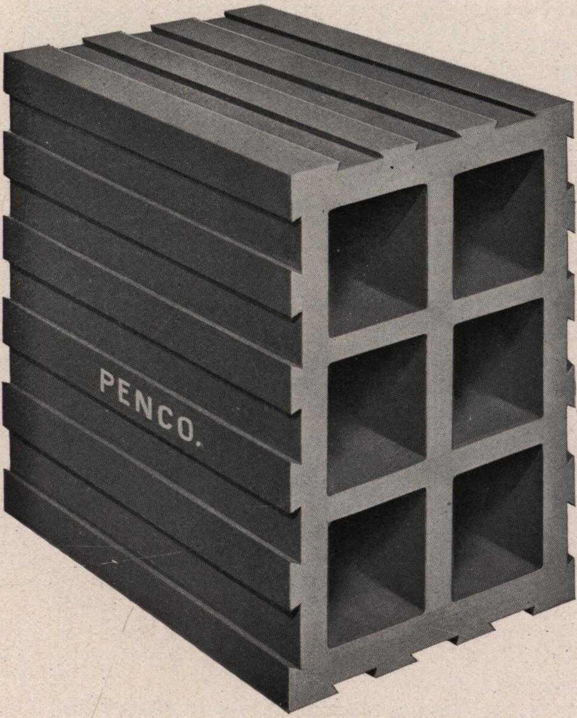






"PENCO" HOLLOW TILE

for Exterior Walls.



Extra Heavy *Hard Burned*

Weight per block.

		6-Cell.	9-Cell.
6 x 12 x 12	—	28 lbs.	—
8 x 12 x 12	—	36 "	—
10 x 12 x 12	—	41 "	47 lbs.
12 x 12 x 12	--	49 "	53 "

"PENCO" HOLLOW TILE
for Exterior Walls.

These blocks are made for 6″—8″—10″ and 12″ walls, and the standard blocks have six air cells.

For extra heavy work the 10″ and 12″ wall tile are made with nine air cells.

Surfaces heavily keyed to hold plaster or stucco.

Official compression tests show that the 8″ wall block will take a maximum load of 115 tons, and the 12″ wall block—210 tons.

Sectional blocks furnished to take care of corners and to effect proper bond. Also jamb blocks for window frames.

The ideal construction — *Warm in Winter — Cool in Summer — Sound proof — Vermin proof.*

Plaster can be applied directly to face of tile, thus saving cost of wood furring strips and lath.

Wall will not warp or crack plaster and our tile will not discolor or stain plaster.

COMPRESSION TEST
by Ordnance Department, U. S. A.

U. S. Testing Machine (Capacity 800,000 lbs.)

Watertown Arsenal, Mass.

Pennsylvania Fireproofing Co.'s Hollow Fire Clay Building Tile.

Test No. 14,070 Sept. 13, 1909.

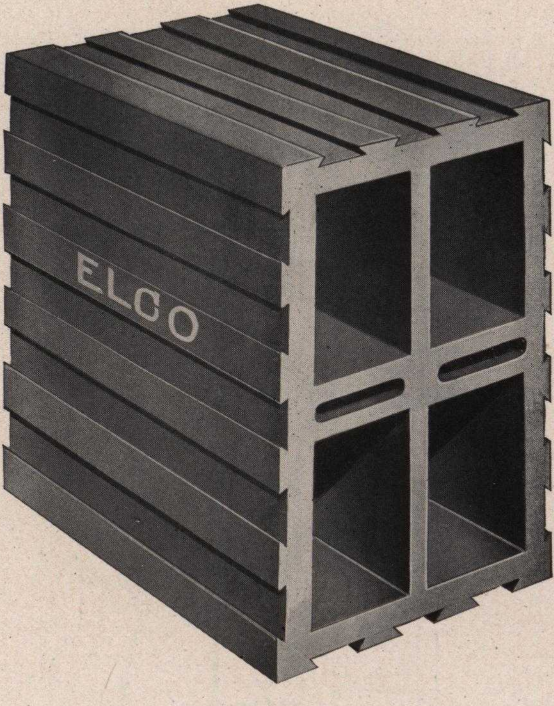
Size of Blocks 12″ x 12″ x 12″ — 6 cell.

No. 1
Sectional area 55.56 square inches.
Ultimate strength 475,200 lbs.
" " 8,553 " per square inch.

No. 2
Sectional area 54.69 square inches.
Ultimate strength 378,500 lbs.
" " 6,921 " per square inch.

Average 7,737 lbs. per square inch.

Signed, C. B. WHEELER,
Lt. Col., Ord. Dept., U. S. A.
Commanding.



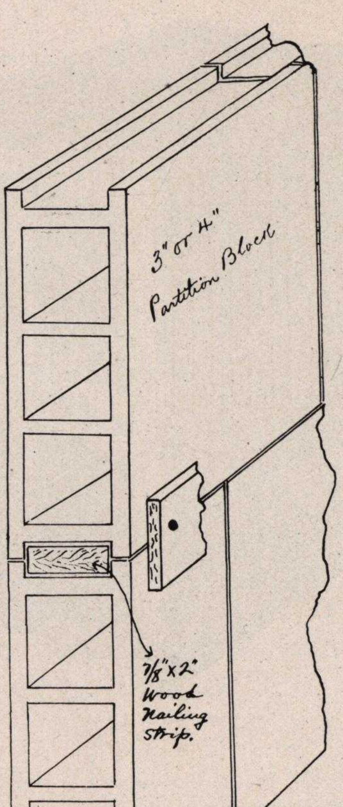
The **"Elco"** Block with the extra heavy central web is made to meet a demand for a terra cotta hollow tile that can be laid up in the wall with air cells vertical and with the shells and webs coming over each other and in perfect alignment when placed in the wall. This block is made very heavy to meet the most exacting specification.

Made for 8″, 10″ and 12″ walls, with proper Jamb blocks for window frames.

Weights per block or square foot.

8 x 12 x 12	— 37 lbs.	(4 cell)
10 x 12 x 12	— 49 "	(4 cell)
12 x 12 x 12	— 55 "	(6 cell)

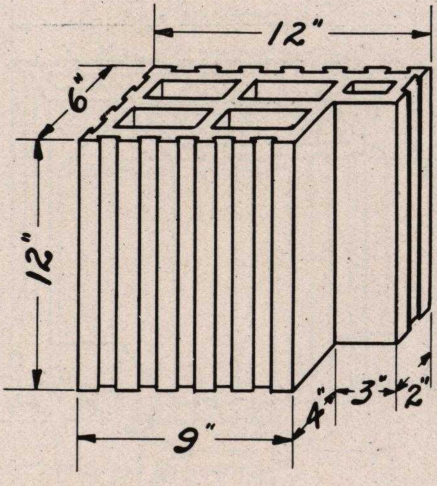
PARTITION NAILING GROUNDS.



The illustration shows clearly that, by means of a groove in the ends of standard hard burned partition tile a space is provided for a wood strip which is imbedded in mortar and enclosed on all sides. Nails driven through plaster grounds or trim pass through mortar joint and into wood strip. This makes a better job than nailing through so called full porous tile which, while it will take a nail, will not hold it.

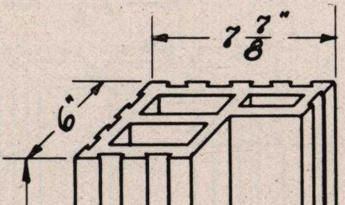
These tile can be set up so that both vertical and horizontal nailing grounds will be available.

WINDOW JAMB BLOCK
FOR 6" WALL.



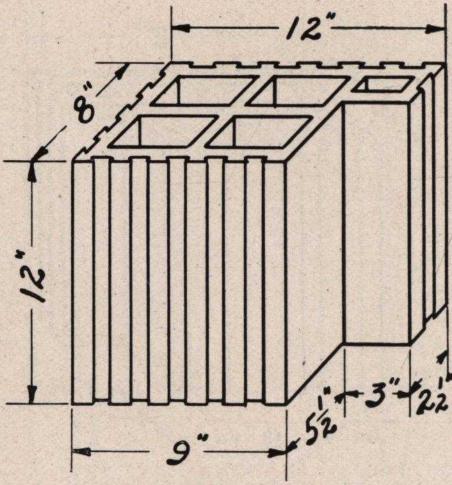
Full Size Block.

We furnish these in half blocks 6″ high.



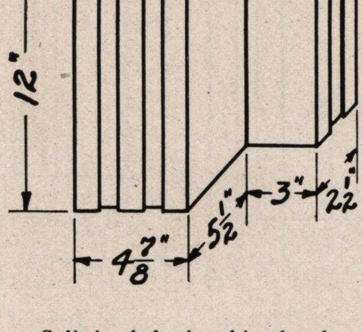
Split jamb for breaking bond.

WINDOW JAMB BLOCK FOR 8" WALL.



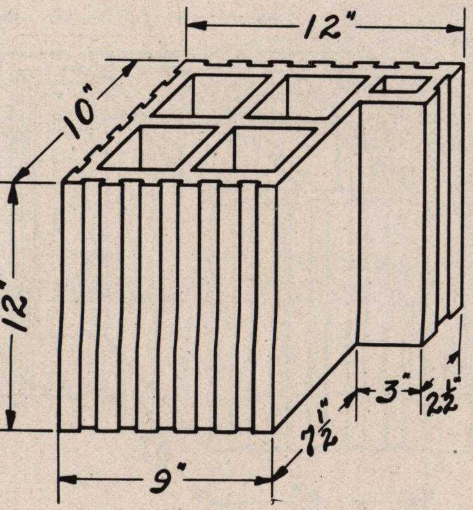
Full Size Block.

We furnish these in half blocks 6" high.



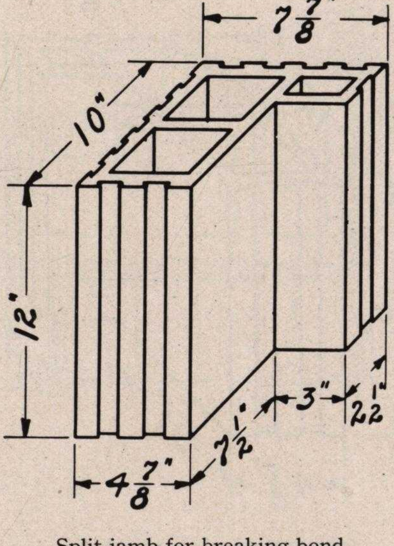
Split jamb for breaking bond.

WINDOW JAMB BLOCK FOR 10" WALL.



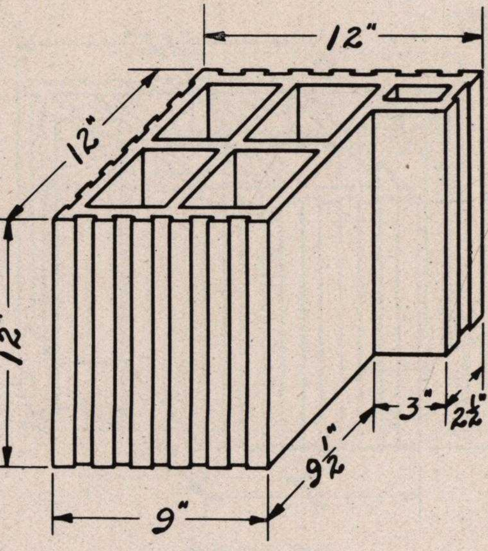
Full Size Block.

We furnish these in half blocks 6″ high.



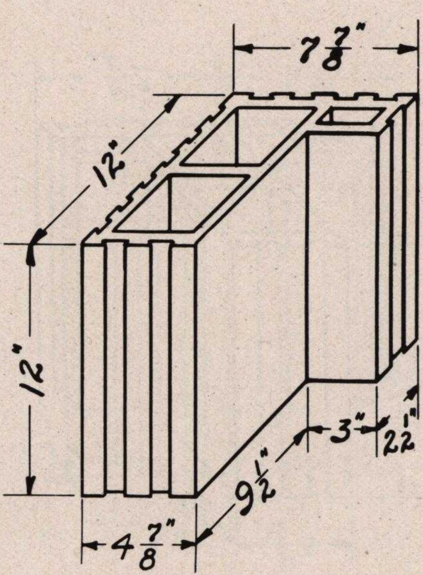
Split jamb for breaking bond.

WINDOW JAMB BLOCK FOR 12" WALL.



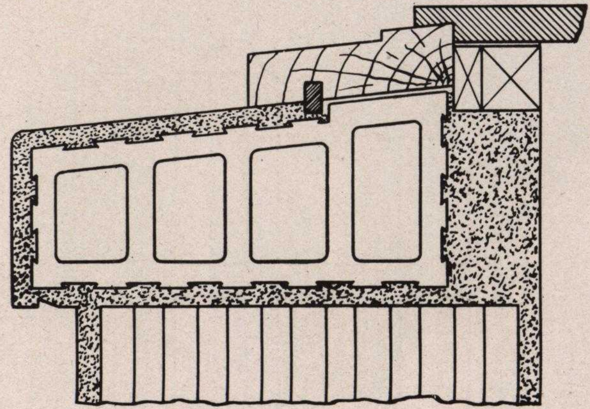
Full Size Block.

We furnish these in half blocks 6″ high.

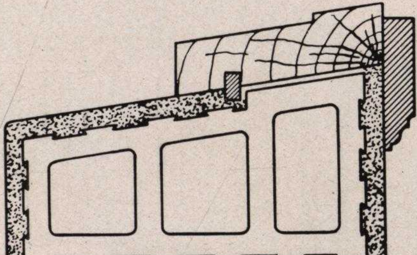


Split jamb for breaking bond.

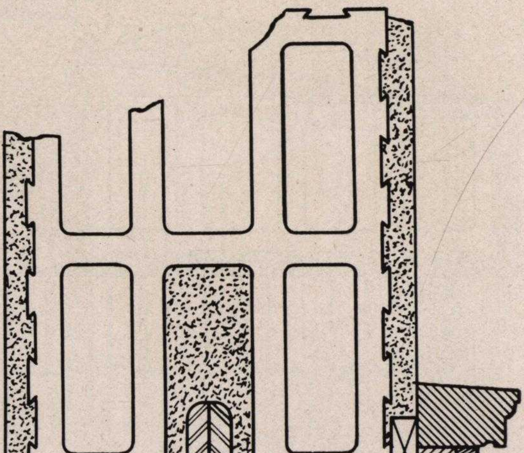
WINDOW SILL BLOCK FOR 10" AND 12" WALL.



WINDOW SILL BLOCK FOR 8" WALL.

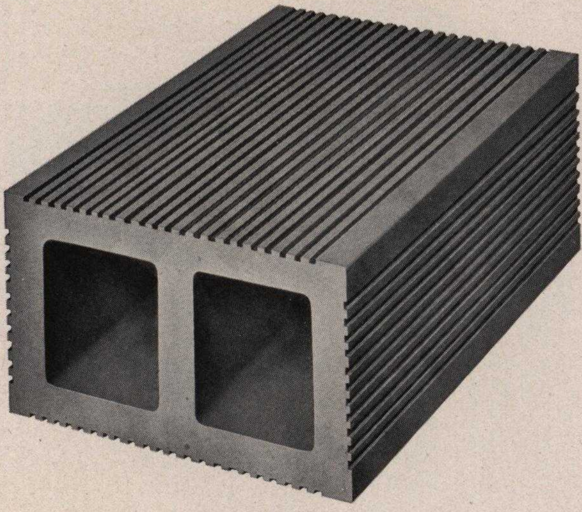


TREATMENT OF LINTEL IRONS.



When angle irons are used as lintels over window and door openings, they are applied as shown in illustration. The horizontal lips are covered with a standard shoe tile, and the vertical web of angle is covered by our standard wall block by merely knocking out the shell of the central air cell in block. This portion of the shell is knifed so that it can be very easily knocked out by mason.

HOLLOW BRICK.



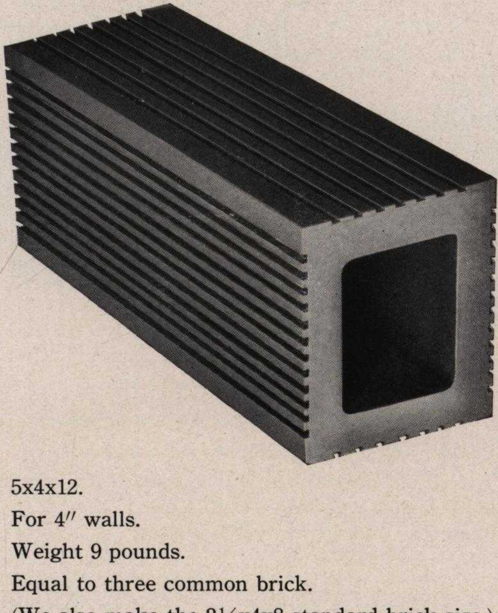
5x8x12.

For 8″ walls.

Weight 16 lbs.

Equal to six common brick.

Headers for binding and corner closures, furnished in all sizes.



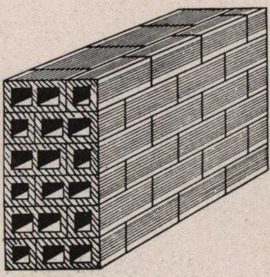
5x4x12.

For 4″ walls.

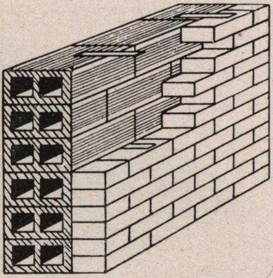
Weight 9 pounds.

Equal to three common brick.

(We also make the 2¼x4x8 standard brick size.)



Above cut illustrates an all tile 12″ wall using the 5x8 and the 5x4 Hollow Brick.



Above cut illustrates a 12″ wall with brick veneer and 5x8 Hollow Brick backing.

A Few Facts.

These Hollow Bricks are cheaper than solid common bricks; material only considered.

A mason will lay up in the wall a number of these Hollow Brick equal to 1800 common brick per day. A saving of at least 50% of the high mason labor cost.

It takes *less mortar* to lay up these Hollow Brick.

The safe load of common solid brick work in cement mortar is ten tons per square foot.

The safe load of our Hollow Brick by test with factor of safety of ten is 10.9 tons per square foot.

Individual Hollow Brick have been tested and found to carry an ultimate average load of 177,600 lbs. each for the 5x8x12 and 137,400 lbs. each for the 5x4x12.

When laid up in wall, shells and webs are in perfect alignment.

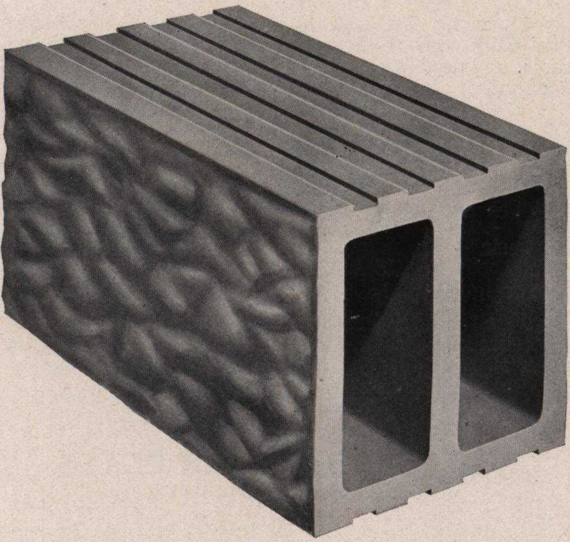
No through vertical mortar joints in 12″ walls.

We make these Hollow Brick smooth or rock faces or with faces keyed to receive stucco or plaster, hard burned or glazed.

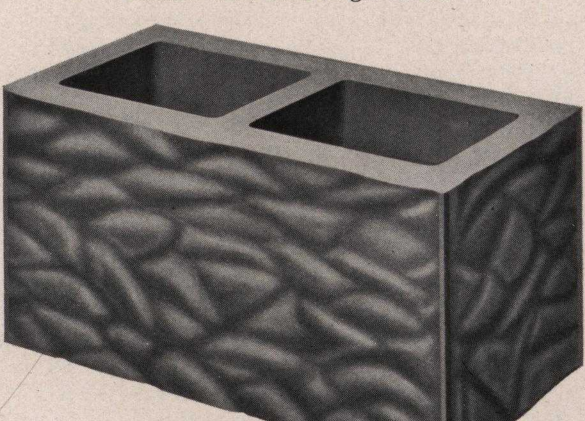
A wall put up with our *hard* burned Hollow Brick is perfectly dry and plaster can be applied directly to the keyed face of brick, *thus saving* the cost of *furring* and *lath* which is necessary on a solid brick wall.

Be sure and get our prices, we can save you considerable money.

HOLLOW TILE BUILDING BLOCKS.



8x8x16 Wall Block weight 35 lbs.



8x8x16 Corner Blocks weight 40 lbs.

An ideal block for Automobile Garages, small Factory Buildings, Dryer Houses, and all classes of Farm Buildings. These blocks can be made up with Smooth, Keyed or Rock Faces to meet all requirements for painting, stucco or to leave natural Terra Cotta rock face finish. This form of tile makes a cheap wall and at the same time a very good one. The double hollow air space keeps out heat, cold and moisture. Under test the wall block lying on its side with center web vertical withstood an average of 77,000 lbs. or 38 1-2 tons pressure.

ANALYSIS.

Chemical Analysis of Elk County, Pennsylvania, **Fire Clay** taken from our Mines at St. Marys, Pennsylvania, and used in proper proportion in the manufacture of our tile.

		Plastic Clay	Refractory Clay
Silica	(Si02)	54.56%	70.76%
Iron Oxide	(Fe203)	5.43	1.71
Alumina	(Al203)	26.49	20.01
Lime	(Ca0)	.66	none
Magnesia	(Mg0)	1.44	.90
Alkalis	(K20.Na20)	2.91	1.26
Loss on Ignition		8.50	5.35

Note the high percentage of Alumina and Silica—the two essential properties required in a good fireproofing material.

ANALYSIS OF OTHER CLAYS.

(KNOWN AS FIRE CLAY).

	Illinois	Indiana	Ohio No. 5
Silica	48.36%	50.78%	58.75%
Oxide of Iron	5.46	5.60	2.57
Alumina	12.34	14.40	26.43
Lime	9.30	7.25	.37
Magnesia	5.55	4.80	.77
Potassium Oxide	2.94	3.47	1.49
Sodium Oxide	1.32	.79	.45
Loss on Ignition	14.78	13.18	9.27

The above is for comparison with our clay.

ABSORPTION TESTS ON PENCO HOLLOW TILE.

Tile were first dried to a constant weight at a temperature of 120° F., and were then placed in water, with their upper portion projecting slightly above the surface of the water.

Per cent. of absorption after soaking

30 minutes	2.6%
2 hours	3.6
4 "	3.8
24 "	4.8
48 "	5.0

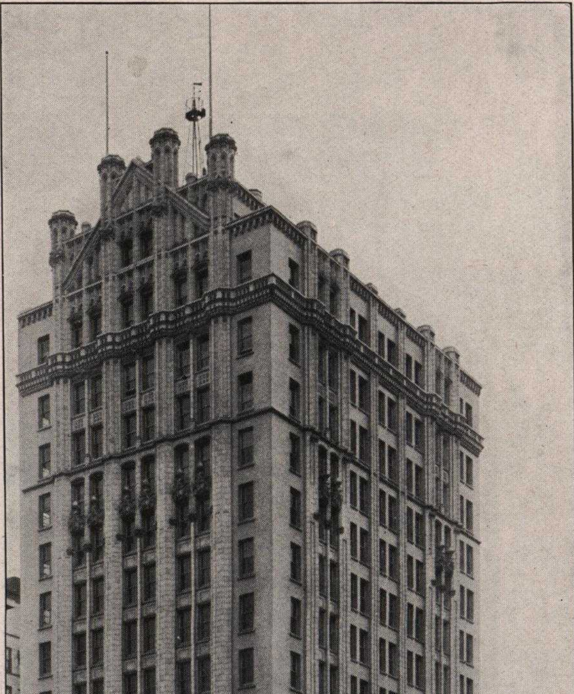
Further particulars regarding this test furnished on application.

SOME OF THE IMPORTANT BUILDINGS IN WHICH OUR TILE HAS BEEN USED.

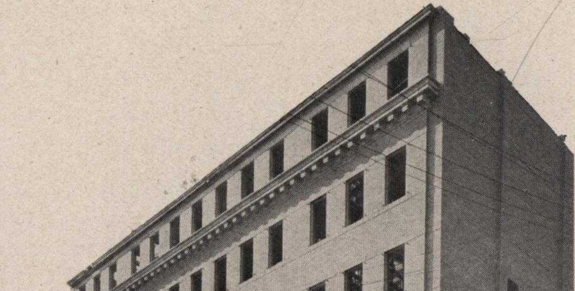
Anderson Dray & Storage Co. Bldg.,	Washington, D. C.
Army and Navy Club Bldg.,	“ “
Augusta Hospital	Augusta, Maine
Bachelor Apartment Bldg,,	Washington, D. C.
Bedford Ave. High School,	Pittsburg, Pa.
Briar Cliff Lodge,	Briar Cliff, N. Y.
Cadet Barracks,	West Point, N. Y.
Carnegie Library,	Homestead, Pa.
Carnegie Tech School,	Pittsburg, Pa.
Capitol Park High School,	Washington, D. C.
Casey Hotel,	Scranton, Pa.
Chandler Bldg.,	Boston, Mass.
Century Bldg.,	Pittsburg, Pa.
Cleveland School of Art,	Cleveland, Ohio.
Clifton Springs Sanitorium,	Clifton Springs, N. Y.
C. & P. Telephone Bldg.,	Richmond, Va.
Court House,	Syracuse, N. Y.
Curtze Wholesale Grocery Warehouse,	Erie, Pa.
Chamber of Commerce Bldg., (10 story)	“ “
Department Store Bldg., 13th & F. Sts.,	Washington, D. C.
Eastman Kodak Bldg.,	Rochester, N. Y.
Edwards Bldg.,	Syracuse, N. Y.
Emergency Hospital,	Washington, D. C.
Emporium Powder Company Bldgs.,	Emporium, Pa.
Enterprise Cut Glass Co. Bldg.,	Elmira Heights, N. Y.
Fish Wharf Association Bldgs.,	Boston, Mass.
Forestry & Headquarters Bldgs., Cornell,	Ithaca, N. Y.
Fort Pitt Hotel,	Pittsburg, Pa.
G. A. R. Memorial Hall,	Nunda, N. Y.
Hamilton College Bldgs.,	Clinton, N. Y.
High School Bldg.,	Wayland, N. Y.
International Paper Co. Bldg.,	Corinth, N. Y.
“ “ “ “	Livermore Falls, Me.
“ “ “ “	Rumford Falls, Me.
International Time Recording Co. Bldg.,	Endicott, N. Y.
Keystone Power Company Bldgs.,	Emporium, Pa.
Knights of Columbus Bldg.,	New Haven, Conn.
K. P. L. Furniture Co. Bldg.,	Corry, Pa.
Marine Bank Bldg.,	Erie, Pa.
Masonic Home,	Utica, N. Y
Masonic Temple	Erie, Pa.

National Exchange Bank, - -	Olean, N. Y.
Nixon Hotel, - - - -	Butler, Pa.
North Eastern Terra Cotta Co. Bldg.,	Bradford, Pa.
P. B. & W. Office Bldg., - -	Wilmington, Del.
Perrin High School, - -	Dorchester, Mass.
Palais-Royal Bldg., - - -	Washington, D. C.
Pittsburg Coal Co. Bldg., - - -	Pittsburg, Pa.
Post Office Bldg., - - -	Washington, Pa.
Public School Bldg., No. 41, - -	New York City.
Rochester Armory Bldg., - -	Rochester, N. Y.
Saint Luke's Hospital, - - -	Utica, N. Y.
Schwarzenbach Brewing Co. Bldg.,	Hornell, N. Y.
Seneca Bldg., (16 Story) - - -	Buffalo, N. Y.
Shady Ave. School Bldg., - -	Pittsburg, Pa.
Stewart, W. L., Residence, - -	“ “
Syracuse Post Office Bldg., - -	Syracuse, N. Y.
Syracuse University Bldg., - -	“ “
Taft Hotel - - - -	New Haven, Conn.
Union Station - - - -	Norfolk, Va.
University Club Bldg., - -	Washington, D. C.
Weiner Block, - - - -	Kane, Pa.
Woodward & Lathrop Store, -	Washington, D. C.
Woodward Office Bldg., - - -	“ “

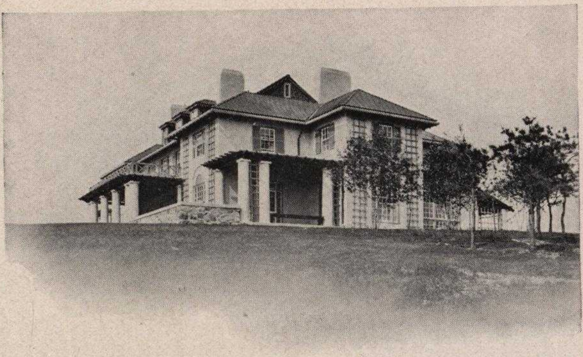
Following are illustrations of a few of the buildings in which our tile has been used.



New York Telephone Building, Buffalo, N. Y.

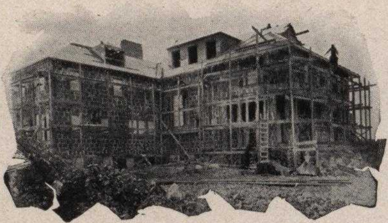


Nurses Home, Pittsburgh, Pa.

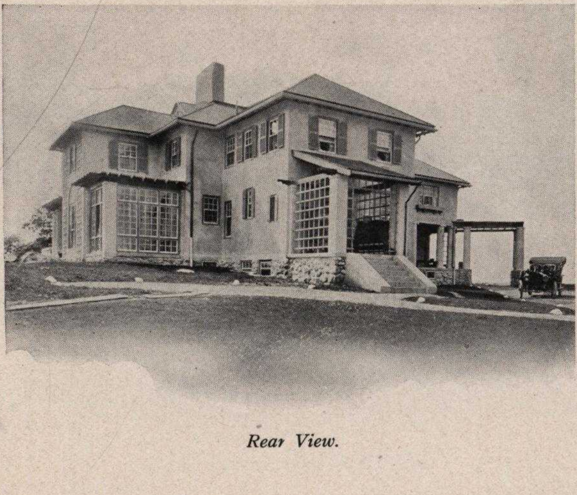


Front View.

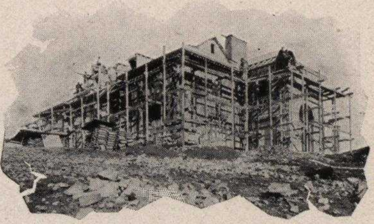
An $80,000.00 New England Country Home.
All of Penco Tile.



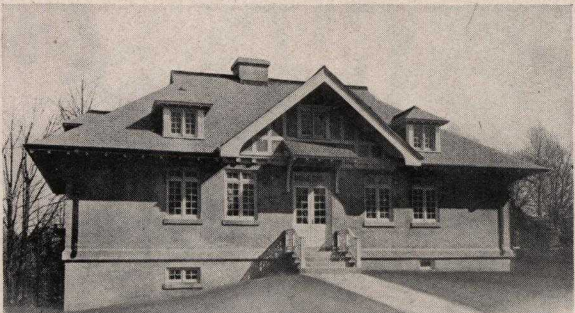
The same in course of construction.



Rear View.

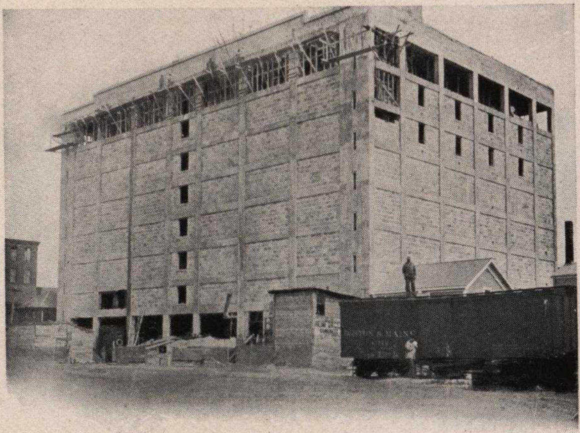


$80,000.00 Home in course of construction.

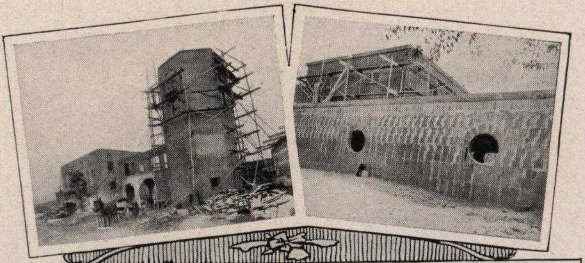


A Country Bungalow of Penco Tile.

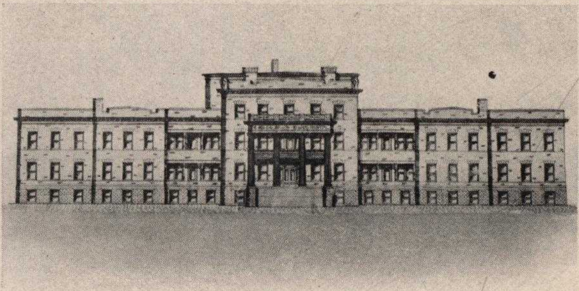
$80,000.00 Home in course of construction.



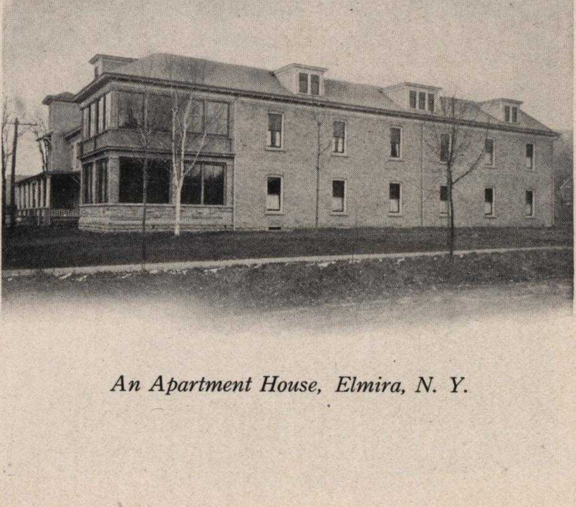
Warehouse, Boston, Mass.



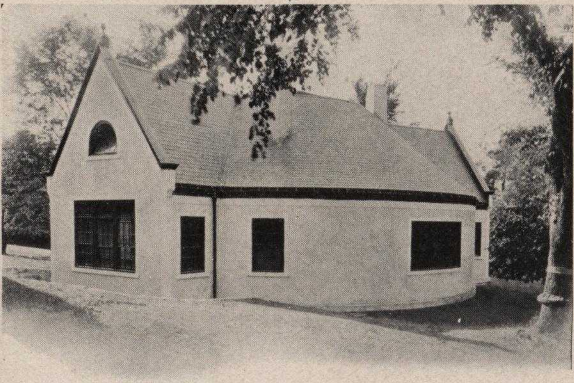
Dairy Barns. All Penco Tile.



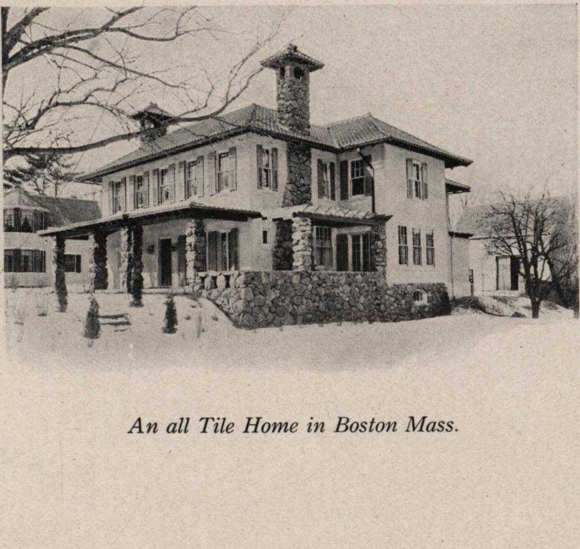
Memorial Hospital, Danville, Pa.



An Apartment House, Elmira, N. Y.



A Tile Garage.



An all Tile Home in Boston Mass.

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